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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/811,863	03/30/2004	Eytan Cohen	P-6096-US1	3839
49443	7590	07/11/2006	EXAMINER	
PEARL COHEN ZEDEK, LLP 1500 BROADWAY 12TH FLOOR NEW YORK, NY 10036			MARTIN, LAURA E	
			ART UNIT	PAPER NUMBER
			2853	

DATE MAILED: 07/11/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/811,863	Applicant(s) COHEN ET AL.	
	Examiner Laura E. Martin	Art Unit 2853	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 April 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 3, 12, 13, and 14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

While claims 3 and 12 broadly claim three types of microwave radiation absorbers, claims 13 and 14, dependent on claims 3 and 12, claim only one of the three types of microwave radiation.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 5, 6, 8, and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Teng (US 6242156) in view of Meyrick et al. (US 6344497).

Teng discloses:

As per claims 1 and 8: Microwave curable ink for piezo electric drop on demand inkjet printing, a method of microwave curing, a method of printing on an optically reflective surface, and an ink jet ink composition comprising: molecules of material capable of undergoing a polymerization reaction under the influence of microwave

radiation (column 8, lines 17-29), a microwave radiation absorber, the absorber enhancing absorption of microwave radiation and conversion of said radiation into heat (column 8, lines 2-16), an initiator (column 8, lines 2-16) a colorant (column 8, lines 17-29) and additives (column 8, lines 17-29).

As per claim 6: an ink having a microwave absorber (column 8, lines 2-16) and an initiator (column 8, lines 2-16), said absorber enhancing microwave radiation; printing with said ink an image bearing a patten on a substrate (column 1, lines 12-20); irradiating by microwave radiation said printed image bearing patten, such that said image bearing pattern is cured by heat generated by microwave radiation (column 8, lines 17-29).

Teng does not disclose:

As per claims 1, 6, and 8: a thermal initiator.

As per claims 5 and 10: an additive being one of a wetting agent, dispersants, rheology modifiers, solvents, or defoamers.

Meyrick et al. discloses:

As per claims 1, 6, and 8: a thermal initiator (column 11, lines 35-36).

As per claims 5 and 10: an additive being one of a wetting agent, dispersants, rheology modifiers, solvents, or defoamers (column 7, lines 42-50).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the ink set and method taught by Teng with the disclosure of Meyrick et al. in order to increase the simplicity of the initiating mechanism.

Claims 2 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Teng (US 6242156) and Meyrick et al. (US 6344497), and further in view of Arai et al. (US 5470691).

Teng and Meyrick et al. do not disclose:

The ink wherein said molecules are acrylic monomers, acrylic oligomers, or any combination thereof.

Arai et al. discloses:

The ink wherein said molecules are acrylic monomers, acrylic oligomers, or any combination thereof (column 16, lines 4-25).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the ink taught by Teng as modified with the disclosure of Arai et al. in order to create a higher quality ink.

Claims 3 and 12-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Teng (US 6242156) and Meyrick et al. (US 6344497), and further in view of Van Damme et al. (US 6620573).

Teng and Meyrick et al. do not disclose:

The microwave radiation absorber is at least one of carbon black, minerals, and polar molecules, the polar molecules being alcohols, amines, ammonium salts, or conductive polyesters.

Van Damme et al. discloses:

The microwave radiation absorber is at least one of carbon black, minerals, and polar molecules, the polar molecules being alcohols, amines, ammonium salts, or conductive polyesters (column 3, line 58-column 4, line 2).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the ink taught by Teng as modified with the disclosure of Van Damme et al. in order to create a more efficient microwave absorber.

Claims 4 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Teng (US 6242156) and Meyrick et al. (US 6344497), and further in view of Santo (US 5965252).

Teng and Meyrick et al. do not disclose:

The thermal initiator being at least one of lauroyl peroxide, cumenn peroxide dycumyl peroxide, tert-amyl peroxy-benzoate, dentanedione-peroxide, and 1,1'azobis-cyclohexane carbonitryl.

Santo discloses:

The thermal initiator being at least one of lauroyl peroxide, cumenn peroxide dycumyl peroxide, tert-amyl peroxy-benzoate, dentanedione-peroxide, and 1,1'azobis-cyclohexane carbonitryl (column 19, lines 5-51).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the ink taught by Teng as modified with the disclosure of Santo in order to create a higher quality ink set.

Claims 7 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Teng (US 6242156) in view of Meyrick et al. (US 6344497) and Aoki (US 5965252).

Teng discloses:

Microwave curable ink for piezo electric drop on demand inkjet printing, a method of microwave curing, a method of printing on an optically reflective surface, and an ink jet ink composition comprising: molecules of material capable of undergoing a polymerization reaction under the influence of microwave radiation (column 8, lines 17-29), a microwave radiation absorber, the absorber enhancing absorption of microwave radiation and conversion of said radiation into heat (column 8, lines 2-16), an initiator (column 8, lines 2-16) a colorant (column 8, lines 17-29) and additives (column 8, lines 17-29).

Teng does not disclose:

Printing an image on an optically reflecting substrate which is a glass, plastic, or marble surface; or a thermal initiator.

Meyrick et al. discloses:

A thermal initiator (column 11, lines 35-36).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the ink set and method taught by Teng with the disclosure of Meyrick et al. in order to increase the simplicity of the initiating mechanism.

Aoki discloses:

Printing an image on an optically reflecting substrate which is a glass, plastic, or marble surface (column 2, lines 30-37).


It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the ink taught by Teng with the disclosure of Aoki in order to create a wider variety of printing surfaces and uses for the ink jet ink.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Laura E. Martin whose telephone number is (571) 272-2160. The examiner can normally be reached on Monday - Friday, 7:00 - 3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen D. Meier can be reached on (571) 272-2149. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Laura E. Martin

 7/6/06
MANISH S. SHAH
PRIMARY EXAMINER